

Obituary: Alice Faber Tryon (1920–2009)



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Alice Faber Tryon became a member of the American Fern Society in 1946 and in 1978 was elected to honorary membership, a special category of membership for those who have made outstanding contributions to the study of ferns. An eminent student of ferns and their spore morphology, she was born Alice Elizabeth Faber in Milwaukee, Wisconsin on August 2, 1920 (according to her sister Jane, she celebrated her birthday on August 1, although her birth certificate reads August 2). She was the second of three children of Arthur H. and Laura Bindrich Faber, and all four of her grandparents had roots in Germany. Known in her family as an ambitious and hardworking woman, Alice was *Aunt Fern* to her nieces and nephews. Alice graduated from the Milwaukee State Teacher's College, now the University of Wisconsin at Milwaukee, in 1941. After several years teaching in public schools, she went to the University of Wisconsin at Madison where she met Rolla M. Tryon Jr. and married him on March 16, 1945. This initiated a happy and enduring domestic

Photograph by Gerald Gastony at Alice Tryon's Azalea Trace apartment in 2005.

partnership and a research synergism whose productivity has nourished pteridologists throughout the world. Also in 1945, she completed her master's thesis at Wisconsin, began her doctoral studies there under Rolla's direction, and moved with him to the University of Minnesota where Rolla served briefly as an Assistant Professor. The couple moved to the Missouri Botanical Garden in St. Louis in 1947 where Alice completed her doctoral degree at Washington University in 1952.

Alice's life work was the study of fern diversity. During her career, she published nearly 50 contributions to the literature on ferns, including three full-length books. Spores have always been prominent in Alice's work, beginning with her master's thesis, which addressed the taxonomic utility of spore characters in the spikemoss genus *Selaginella*. Her doctoral dissertation analyzed the diversity and taxonomy of the New World species of *Pellaea*, a genus of xerically adapted ferns of the Pteridaceae, a family that remained central to her work during the first half of her career. Her time in St. Louis was followed by a year at the University of California at Berkeley where Rolla was a Research Associate during 1957. In 1958, she and Rolla joined the staff of the Gray Herbarium at Harvard University, where her next major focus was a monograph (1962) of the Andean alpine gymnochromoid genus *Jamesonia*. Following this, she monographed the closely related Andean-centered gymnochromoid genus *Eriosorus* (1970). To these revisions, she added papers on reproductive biology and biogeography of the Pteridaceae, notably studies of apogamy in *Pellaea* (1968, 1972), and of incipient heterospory in *Platyzoma* (1964, 1967).

Fern spores were the central focus of Alice's interests in the second half of her career, resuming an interest in spores first expressed in her master's research on the spores of *Selaginella* (1945, 1949). At Harvard, she played a central role in introducing the scanning electron microscope as a research and teaching tool, pioneering its use in the study of fern spores. Prominent among her contributions on spores are her works on evolutionary and ecological trends in spore features (1964, 1973, 1986, 1990), including her study of the specialized spore surfaces of the myrmecophytic ferns (1985). Her book with Bernard Lugardon, *Spores of the Pteridophyta* (1991), is likely to remain the authoritative reference on spore morphology for decades to come.

Alice's professional and personal history is inextricably tied to that of her husband, Rolla M. Tryon, Jr. (1916–2001). Their jointly published work most notably includes *Ferns and Allied Plants with Special Reference to Tropical America* (1982), an in-depth survey of fern diversity with emphasis on the New World tropics. This monumental book, containing numerous photographs by Walter H. Hodge, continues to provide many taxonomic hypotheses that are testable by today's molecular techniques. Together, Alice and Rolla mentored a group of graduate students who have gone on to be prominent in pteridology (see discussion in Gastony *et al.*, 2002). They organized and taught their *Fern Biology in Mexico* course with Ramón Riba, one of their students, five times between 1971 and 1981. This stimulating opportunity to do science with ferns in the field was a formative experience for all participating students.

Alice and Rolla had a lifelong investment in creating venues in which scientists could interact in the kinds of informal, relaxed settings that lead to the development of new insights about the botanical world, especially the ferns, but in much broader contexts as well. Prominent among these is the Missouri Botanical Garden's annual *Systematics Symposium*, initiated by Rolla and Alice during their time in St. Louis, and the *New England Fern Conference*, which Rolla and Alice inaugurated in 1970.

Following her arrival in New England in 1958, Alice was deeply involved in the New England Botanical Club. She was elected its first woman member in 1968. After serving as recording secretary and vice president, Alice was elected the club's first woman president in 1978. During her time as president, the club inaugurated several successful programs, including a focus on New England's rare and endangered species in the 1979 symposium *Rare and Endangered Plant Species in New England*, the proceedings of which were published in 1980. Her interest in New England and long-time residence there led Alice to develop her last book, *The Ferns and Allied Plants of New England* (1997), coauthored with Robbin Moran. This book is notable for its images of the plants, including both the classic photographs of Robert L. Coffin and the more recent work of noted botanist and photographer Walter H. Hodge. For this book, Alice included spore images for each of the New England pteridophytes, a fortunate inclusion for students of New England Pleistocene biogeography who find this resource invaluable in their analyses of palynological cores.

After their retirements from Harvard, Alice and Rolla retired to Florida in 1989. While there, they continued their pattern of supporting small venues for the discussion of scientific ideas by founding the Institute for Systematic Botany and the Tryon Lecture Series at the University of South Florida in Tampa. In 1990, Alice and Rolla were honored with a festschrift occupying pages 222–339 of *Annals of the Missouri Botanical Garden* volume 77. This tribute to the Tryons featured an opening photograph of them at the portrait of Daniel C. Eaton (first American pteridologist) at Harvard University, an introductory summation of their contributions to pteridology, a closing photograph of them by Walter H. Hodge, and contributed papers by the following: Cathy A. Paris and David S. Barrington; R. James Hickey; Robbin C. Moran; Alan R. Smith; Robert G. Stolze; Gillian A. Cooper-Driver; Ramón Riba and Irma Reyes J.; David S. Conant; David S. Barrington; Gerald J. Gastony; Christopher H. Haufler, Michael D. Windham, and Thomas A. Ranker; Karl U. Kramer; and Diana B. Stein and David S. Barrington.

For more than a decade, Alice's and Rolla's partnership in scholarly work and community outreach about the ferns of Florida were centered at the University of South Florida, ending with Rolla's death in 2001. Following that, Alice moved to the Azalea Trace retirement community in Pensacola, Florida where the Tryons' good friends Walter and Barbara Hodge were already in residence. Among Alice's final acts of scientific altruism were her generous establishments of endowments for the Field Museum in Chicago, the New England Botanical Club, the Alice and Rolla Tryon Pteridophyte Library at the

Pringle Herbarium of the University of Vermont, and the Rolla and Alice Tryon Scholarship Fund in support of the Woman in Science program of the Department of Botany at the University of Wisconsin, Madison.

Comforted by her care-giving friends, Alice died peacefully in her garden apartment at Azalea Trace on March 29, 2009, surrounded by many mementoes of a life happily shared with Rolla and dedicated to advancing our knowledge of ferns. On September 27, 2009, the authors and their wives united Alice's ashes with Rolla's on a ferny hill in northern Vermont. A simple bronze plaque affixed to a boulder at the site records their passing with the following words.

IN MEMORY OF

ROLLA M. TRYON JR. (1916–2001)

AND ALICE F. TRYON (1920–2009)

EMINENT PTERIDOLOGISTS

LITERATURE CITED

GASTONY, G. J., D. S. BARRINGTON and D. S. CONANT. 2002. Obituary: Rolla Milton Tryon, Jr. (1916–2001). *Amer. Fern J.* 92:1–9.

BIBLIOGRAPHY OF ALICE F. TRYON (1920–2009)

- TRYON, A. F. 1945. A taxonomic study of spores of *Selaginella* subgenus *Euselaginella* in North America north of Mexico. Master's Thesis. University of Wisconsin, Madison.
- TRYON, A. F. 1947. Glandular prothallia of *Notholaena standleyi*. *Amer. Fern J.* 37:88–89.
- TRYON, A. F. 1949. Spores of the genus *Selaginella* in North America, north of Mexico. *Ann. Missouri Bot. Gard.* 36:413–431.
- TRYON, A. F. 1952. A revision of the American species of the fern genus *Pellaea*. Ph.D. Dissertation. Washington University, St. Louis.
- TRYON, A. F. 1954. Problems in some of the American species of *Pellaea*. *Proc. Eighth Int. Bot. Cong.* 8:19–20.
- TRYON, A. F. 1955. A new *Pellaea* from South Africa. *Ann. Missouri Bot. Gard.* 42:101–103.
- TRYON, A. F. 1957. A revision of the fern genus *Pellaea* section *Pellaea*. *Ann. Missouri Bot. Gard.* 44:125–193.
- TRYON, A. F. 1957. The vegetable lamb of Tartary. *Amer. Fern J.* 47:1–7.
- TRYON, A. F. 1957. A leaf of fern. *Perspective* 3:12–15.
- TRYON, A. F. and D. M. BRITTON. 1958. Cytotaxonomic studies on the fern genus *Pellaea*. *Evolution* 12:137–145.
- TRYON, A. F. 1959. Ferns of the Incas. *Amer. Fern J.* 49:10–24.
- TRYON, R. and A. TRYON. 1959. Observations on the cultivated ferns: the hardy species of tree ferns (*Dicksonia* and *Cyatheaceae*). *Amer. Fern J.* 49:129–142.
- TRYON, A. F. 1960. Observations on the juvenile leaves of *Pellaea andromedifolia*. *Contr. Gray Herb.* 187:61–68.
- TRYON, A. F. 1961. Some new aspects of the fern *Platyzoma microphyllum*. *Rhodora* 63:91–102.
- TRYON, A. F. 1962. A monograph of the fern genus *Jamesonia*. *Contr. Gray Herb.* 191:109–197.
- TRYON, A. F. 1963. Hermann Karsten, his collections and the Flora Columbiae. *Taxon* 12:103–105.
- TRYON, A. F. 1963. Notes on the fern genus *Eriosorus*. *Rhodora* 65:56–57.

- TRYON, A. F. 1964. *Platyzoma*—a Queensland fern with incipient heterospory. *Amer. J. Bot.* 51:939–942.
- TRYON, A. F. 1965. Trichomes and paraphyses in ferns. *Taxon* 14:214–218.
- TRYON, A. F. 1965. A parcel of Cameroon ferns. *Amer. Fern J.* 55:49–57.
- TRYON, A. F. 1966. Origin of the fern flora of Tristan da Cunha. *Brit. Fern Gaz.* 9:269–276.
- TRYON, A. F. and G. VIDA. 1967. *Platyzoma*: a new look at an old link in ferns. *Science* 156:1109–1110.
- TRYON, R. M. and A. F. TRYON. 1968. Edith Scamman (1882–1967). *Amer. Fern J.* 58:1–4.
- TRYON, A. F. 1968. Comparisons of sexual and apogamous races in the fern genus *Pellaea*. *Rhodora* 70:1–24.
- TRYON, A. F. 1970. A monograph of the fern genus *Eriosorus*. *Contr. Gray Herb.* 200:54–174.
- TRYON, A. F. 1971. Structure and variation in spores of *Thelypteris palustris*. *Rhodora* 73:444–460.
- TRYON, A. F. 1972. Spores, chromosomes and relations of the fern *Pellaea atropurpurea*. *Rhodora* 74:220–241.
- TRYON, A. and R. TRYON. 1973. *Thelypteris* in northeastern North America. *Amer. Fern J.* 63:65–76.
- TRYON, JR., R. M. and A. F. TRYON. 1973. Geography, spores and evolutionary relations in the cheilanthoid ferns. *Bot. J. Linn. Soc.* 67 Suppl. 1:146–153.
- TRYON, R., B. VOELLER, A. F. TRYON and R. RIBA. 1973. Fern biology in Mexico (a class field program). *BioScience* 23:28–33.
- TRYON, A. F. and R. M. TRYON. 1974. Geographic patterns in temperate American ferns and some relationships in *Thelypteris*. *Amer. Fern J.* 64:99–104.
- TRYON, A. F. and L. J. FELDMAN. 1975. Tree fern indusia: studies of development and diversity. *Canad. J. Bot.* 53:2260–2273.
- TRYON, A. F., H. P. BAUTISTA and I. DA SILVA ARAÚJO. 1975. Chromosome studies of Brazilian ferns. *Acta Amazon.* 5:35–43.
- TRYON, A. F. 1978. New England Ferns (Filicales). *Rhodora* 80:558–569.
- TRYON, A. F. and B. LUGARDON. 1978. Wall structure and mineral content in *Selaginella* spores. *Pollen & Spores* 20:315–340.
- TRYON, A. F. 1980. Foreword to the symposium “Rare and Endangered Plant Species in New England.” *Rhodora* 82:1–2.
- TRYON, A. F., R. TRYON and F. BADRÉ. 1980. Classification, spores, and nomenclature of the marsh fern. *Rhodora* 82:461–474.
- TRYON, R. and A. TRYON. 1981. Taxonomic and nomenclatural notes on ferns. *Rhodora* 83:133–137.
- TRYON, R. and A. F. TRYON. 1982. Additional taxonomic and nomenclatural notes on ferns. *Rhodora* 84:125–130.
- TRYON, R. M. and A. F. TRYON. 1982. *Ferns and Allied Plants with Special Reference to Tropical America*. Springer-Verlag, New York.
- TRYON, A. F. 1985. Spores of myrmecophytic ferns. *Proc. Roy. Soc. Edinburgh* 86B:105–110.
- TRYON, A. F. 1986. Stasis, diversity and function in spores based on an electron microscope survey of the Pteridophyta. Pp. 233–249, in S. Blackmore and I. K. Ferguson, eds. *Pollen and spores: form and function*. Linnaean Society, London.
- WOLLENWEBER, E., C. SCHEELE and A. F. TRYON. 1987. Flavonoids and spores of *Platyzoma microphyllum*, an endemic fern of Australia. *Amer. Fern J.* 77:28–32.
- TRYON, A. F. 1990. Fern spores: evolutionary levels and ecological differentiation. *Pl. Syst. Evol.* Suppl. 5:71–79.
- TRYON, R. M., A. F. TRYON and K. U. KRAMER. 1990. Pteridaceae. Pp. 230–256, in K. Kubitzki, ed. *The Families and Genera of Vascular Plants. Vol. 1. Pteridophytes and Gymnosperms*. Vol. eds. K. U. Kramer and P. S. Green. Springer-Verlag, New York.
- TRYON, A. F. and B. LUGARDON. 1991. *Spores of the Pteridophyta*. Springer-Verlag, New York.
- TRYON, A. F. and R. C. MORAN. 1997. *The Ferns and Allied Plants of New England*. Massachusetts Audubon Society, South Lincoln, Massachusetts.
- TRYON, R. and A. F. TRYON. 1999. Observations on the phytogeography of eastern North American ferns. Pp. 250–273, in X-C. Zang and K-H. Shing, eds. *Ching Memorial Volume*. Institute of Botany, Chinese Acad. Sci., Beijing.